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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/772,080	01/30/2001	Nobutaka Taniguchi	100353-00037	8190

7590 11/03/2004

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WASHINGTON, DC 20036

EXAMINER
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BURD, KEVIN MICHAEL

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/772,080

Applicant(s)

TANIGUCHI ET AL.

Examiner

Kevin M. Burd

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3 and 7-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3 and 7-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

1. This office action, in response to the amendment filed 6/30/2004, is a final office action.

***Response to Amendment***

2. The objection to the abstract is withdrawn in view of the amendment.
3. Applicant's arguments with respect to claims 3 and 7-11 have been considered but are moot in view of the new grounds of rejection. The new grounds of rejection are necessitated by the addition of new claims 7-11. The rejections of these claims are stated below.

***Claim Objections***

4. Claim 8 is objected to because of the following informalities: on line 7, the term "said driver" is recited. It is believed this term should be "said divider". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 8, 10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al (US 6,448,820).

Regarding claims 8, 10 and 11, Wang discloses a delay adjusting circuit in a phase locking loop shown in figure 5. A variable delay circuit is disclosed in element 533. This delay circuit is implemented using a number of buffers or inverters connected in a ring oscillator arrangement (column 6, lines 61-63). The delay circuit 533 outputs a signal to the divider 539. The divider 539 generates clock feedback to the phase comparator 516. The divider circuit divides the frequency of the clock output by an amount from 1 to about 256 (column 7, lines 1-4). The phase comparator compares the phases of the input signal and the frequency divided feedback signal (figure 5 and column 7, lines 5-20). The output of the phase comparator 516 outputs signals to the charge pump. The charge pump will output a control signal 529 to adjust some delay cells 533 to maintain lock or phase relationship (column 6, lines 58-60). The frequency of the divided signal can be less than the frequency of the input signal. The PLL will attempt of lock these signals to the same frequency.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 3, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al (US 6,448,820) in view of Hanke, III et al (US 5,376,848).

Regarding claims 3, 7 and 9, Wang discloses a delay adjusting circuit in a phase locking loop shown in figure 5. A variable delay circuit is disclosed in element 533. This delay circuit is implemented using a number of buffers or inverters connected in a ring oscillator arrangement (column 6, lines 61-63). The delay circuit 533 outputs a signal to the divider 539. The divider 539 generates clock feedback to the phase comparator 516. The divider circuit divides the frequency of the clock output by an amount from 1 to about 256 (column 7, lines 1-4). The phase comparator compares the phases of the input signal and the frequency divided feedback signal (figure 5 and column 7, lines 5-20). The output of the phase comparator 516 outputs signals to the charge pump. The charge pump will output a control signal 529 to adjust some delay cells 533 to maintain lock or phase relationship (column 6, lines 58-60). The frequency of the divided signal can be less than the frequency of the input signal. The PLL will attempt of lock these signals to the same frequency. Wang does not disclose dividing the input signal by a first division rate. Hanke discloses a delay matching circuit shown in figures 5 and 6. Figure 6 discloses a divider circuit capable of dividing the input signal by a number of values to ensure the input signal and the output signal are phase matched. It would have been obvious for one of ordinary skill in the art at the time of the invention to incorporate the teaching of Hanke into the apparatus and method of Wang. By dividing the input frequency, the original signal is locked to the output signal and a more accurate delay adjustment is formed (column 8, lines 31-37).

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Thursday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin M. Burd  
10/23/2004



MOHAMMED GHAYOUR  
SUPERVISORY PATENT EXAMINER